DOCUMENT RESUME

ED 479 946 CE 085 403

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TITLE	Recommendations for Radiologic Technology Workforce Development.
PUB DATE	2003-00-00
NOTE	29p.
PUB TYPE	Information Analyses (070) -- Opinion Papers (120)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	*Allied Health Occupations Education; *Associate Degrees; *College Curriculum; Demand Occupations; Educational Certificates; Entry Workers; Labor Force Development; Labor Needs; Literature Reviews; *Program Development; *Radiologic Technologists; Radiology; *Student Certification; Two Year Colleges
IDENTIFIERS	Alaska; University of Alaska Anchorage

ABSTRACT

A literature review was conducted to establish criteria for the development and establishment of an associate degree program in radiologic technology in Alaska, where traditional education programs had been slow to respond to the current personnel shortage. The information was obtained from a variety of state, regional, and national organizations dating back about 10 years. Twenty-three sources were identified, based on relevance and applicability of recommendations. Several recommendations for length and content of career entry education were considered. Health professions core education, ways to meet the growing shortage of personnel resources, and establishment of foundational education for career advancement were all addressed. The resulting program was an associate of applied science degree in radiologic technology developed by the University of Alaska-Anchorage and delivered over 5 semesters (20 months) using 3 prerequisite courses and 62 credits hours of degree course work (47 professional credits, 15 general degree credits). Successful completion would meet eligibility guidelines for American Registry of Radiologic Technologists certification. (YLB)

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RECOMMENDATIONS FOR RADIOLOGIC TECHNOLOGY WORKFORCE DEVELOPMENT

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ED 479 946

Abstract

Traditional education programs in radiologic technology have been slow to respond to the current personnel shortage. A literature review was conducted to establish criteria for the development and establishment of an Associate degree program in radiologic technology in the state of Alaska. The information obtained in the literature review came from a variety of state, regional, and national organizations dating back approximately 10 years. Several recommendations for length and content of career entry education was considered as well as, health professions core education, ways to meet the growing shortage of personnel resources, and establishment of foundational education for career advancement were all addressed. The resulting program developed was an AAS degree in radiologic technology delivered over 5 semesters (20-months) utilizing 3 pre-requisite courses and 62 credit hours of degree course work (47 professional credits; 15 general degree credits). Successful completion of the program meets eligibility guidelines for American Registry of Radiologic Technologists (ARRT) certification. Twenty-three sources were identified based on relevance and applicability of recommendations.

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Introduction

Health care professionals are the largest and most diverse constituency within the health care workforce. The United States Bureau of Labor Statistics indicates that about 14 percent of all wage and salary jobs created between 1998 and 2008 will be in health services. Twelve out of 30 occupations projected to grow the fastest are concentrated in health services and employment in the health services industry is projected to increase 26 percent through 2008, compared to an average of 15 percent for other industries. (1)

A recent American Hospital Association (AHA) report indicated that the current workforce shortage is so severe; it verges on threatening patients' access to care. Furthermore, the report noted that more than 700 hospitals indicated as many as 168,000 unfilled health care jobs were available across the country. Most notably approximately 126,000 were for registered nurses. Pharmacists (21%), Radiologic Technologists (18%), and Laboratory Technologists (12%) were the most prominent other health professions struggling to fill job vacancies. (2)

The Department of Health and Human Services National Commission on Allied Health cites growing evidence indicting that the number of allied health professionals will not be sufficient to meet future demands of the nation's health care system. (3) It is becoming increasingly apparent that a workforce crisis in health care poses a serious problem for the general population at present and into the future. Health care employment has been identified, as a critical area that will continue to be challenged in securing qualified

workers if a plan is not developed to circumvent the precipitous decline in an interested labor pool.

Concerns regarding the need to fill vacant positions plague all disciplines within the health professions. Broadly applied, health professions include but are not limited to nursing, physical therapy, respiratory care, medical imaging, radiation therapy, medical laboratory technology, occupational therapy, pharmacy, dentistry, general practitioners as well as specialty trained physicians. Nowhere is this crisis in the health care workforce more evident than in the hospital environment. Hospitals have found it increasingly difficult to effectively compete in the healthcare marketplace that continues to diversify services traditionally administered in the hospital environment.

Several recommendations have been developed based on research conducted at universities, state and regional hospital associations, and various federal agencies. Most of these activities have targeted specific health professions, however, the consensus is that manpower shortages are becoming a chronic problem with no short-term solution. In an effort to provide the latest information, the use of Internet sources dedicated to investigating, defining, and recommending solutions to the current workforce crisis has been utilized. Numerous organizations have begun an effort to identify the reasons for the current shortage, establish reasonable projections for future needs, and make recommendations for the health professions. The information obtained over the past two years was used to develop an understanding of the workforce trends as well as formulate

recruitment strategies and professional program delivery for a new Associate of Applied Science Degree in Radiologic Technology at the University of Alaska Anchorage.

Workforce Recruitment and Education Initiatives

Workforce recruitment and education initiatives by state and national organizations have begun to address the current workforce problems. Several state hospital associations have qualified or quantified the current situation regarding the lack of sufficient resources to administer daily activities of a health care organization.

Several federal, state, and professional organizations have produced publications acknowledging workforce concerns, however, implementation of initiatives to address the problems are slowly materializing. Momentum is being gained with advertisement campaigns targeting the benefits of a health care profession. Describing and evaluating what individual organizations have suggested is the first step in addressing the workforce problem. Collectively, these agencies have determined that a singular approach to remedying the workforce problem is not the solution. All the proposed initiatives have wide-ranging suggestions, however, only those directly relevant to education are included here.

Pew Health Professions Commission

The Pew Health Professions Commission produced a series of reports that addressed the needs of the community of health professions as they transition into the 21st century.

In 1995 the Pew Commission generated a report outlining four challenges that they suggested should be addressed to insure the availability of a stable and capably trained health care workforce.

The Commission suggested that the knowledge, skills, competencies, values, flexibility, commitment and morale of the health care workforce would become the most important factors contributing to the success or failure of the health care system. In response to these circumstances, the system that produces health professionals and the structures in which they work will shift away from its supply orientation and toward a demand-driven approach. (4)

The Pew Health Professions Commission's primary recommendations for health care education address "the concern that professional numbers be sufficient to meet the needs of the public, yet not oversupplied in a way that produces excess costs or wastes scarce resources." The Commission notes that professional education has expanded on its own accord, however its attempt to forecast and subsequently manage the level of demand has not been successful. The Commission recommends that health profession schools must "attend themselves more closely to the needs of the emerging systems, in order to develop a sense of numbers of practitioners needed." This means that the individual professions must initiate continuous research efforts to legitimize the rationale used to justify the programs they offer and develop. Without solid objective data these programs will jeopardize the very professions for which they provide trained and educated professionals. This activity should involve educational programs, delivery systems, and

professional associations. This is something that has not been effectively demonstrated in the current environment. (5)

Finally, "professional schools must lead the effort to realign training and education to be more consistent with the changing needs of the care delivery system." The Commission has made recommendations "that effect the scope and training of all health professional groups." Moreover, they have developed a set of competencies for the 21st century practitioner. It is recommended that these competencies be integrated into current health education programs, which will ultimately "encourage enlargement of the health professional's education to include a broader set of system, organizational, and population skills." (5)

Table 1 summarizes the recommendations suggested as a result of the Commission's third and fourth reports and are still relevant today. These particular reports should be used as a guide for organizations and those associated with health professions development in meeting the challenges posed by the transformation of healthcare. (4-5)

INSERT TABLE 1

State and National Initiatives

American Hospital Association (AHA)

The American Hospital Association (AHA) has determined that the current workforce shortage reflects a variety of stressors. These include a fundamental change in the relative attractiveness of careers in hospitals, an increase in the competition from non-hospital employers, such as clinics and minor emergency centers for practitioners, and the aging and pending retirement of the baby boom generation.

Health care employers struggle with a dilemma regarding the replacement of an aging workforce. Seven major implications for hospitals and health systems are noted in this report. One of these specifically addresses education suggesting that educational systems need hospital involvement.

Recently the AHA Commission met for continued discussion of workforce shortage issues. Several subjects were targeted for discussion and included exploring the role of technology in solving the growing workforce shortage. The individuals involved in this committee produced a report in April 2002, which identified some proposed solutions to the workforce crisis. Among some of the points discussed were "how technology could simplify the complex care process by eliminating repetitive tasks, better addressing patient safety issues, minimizing errors and freeing caregivers from paperwork so they could get back to caring for patients." Other identified concerns include addressing "workload and work redesign; opportunities for worker and employer relationship building; technology to support work redesign; strategies for rewarding and valuing employees; expanding the hospital workforce to better include gender, racial and ethnic

minorities and ages; and strategies for outreach to attract more workers into the health care field." (6)

What materialized in the final document 'In Our Hands' included eight challenges that provided strategic goals and several recommendations to accomplish these goals. Challenge 4 addressed improving relationships between academic institutions and hospitals. It was noted that an investment in time, people, and funding was necessary to build a strong and supportive relationship with colleges and universities. Numerous tactical recommendations were stated with practical examples current being implemented. Emphasis was placed on developing collaborative partnerships that provide creative and innovative educational delivery approaches, offer professional development opportunities, scholarships, internships, externships, identify capacity barriers such as the need for additional faculty or clinical training sites, determine expectations for new graduates, cooperatively organized 'roundtable' discussions to solicit feedback, provide suggestions, and chart future activities associated with building the workforce. (7)

Minnesota Hospital and Healthcare Partnership (MHHP)

The Minnesota Hospital and Healthcare Partnership Task Force report on Work Force Development provides valuable information and recommendations. Though this report is specific to the state of the healthcare workforce in Minnesota some conclusions and recommendations are very relevant for the healthcare workforce in general.

The results of this task force were incorporated into a comprehensive set of recommendations summarized in a work force development plan. Recent economic indicators have suggested that the booming economy of the late 1990s has begun to cool. The Minnesota Department of Economic Security and the Bureau of Labor Statistics have indicated that if unemployment remains at less than 5 percent then workforce shortages are likely to occur. Both the US and Minnesota's unemployment rates have been below 5 percent in recent years. If this trend is to reverse, as indicated by recent developments in the economy, the likelihood of a skilled labor force infusion into healthcare is unlikely primarily due to the time lag required to develop particular skills for specific health related occupations. Unskilled labor vacancies within healthcare will be much easier to fill in times of economic recession. (8)

Some concerns identified by the task force included an aging population choosing retirement at earlier ages, occupational opportunities in other more attractive and more lucrative industries, and the fact that an aging population will place more demands on the healthcare system citing that hospital visits will rise 27% in the next 15 years and 48% in the next 20 years. Furthermore, they noted that developing new health education programs is difficult because of a lack of qualified personnel and expensive to maintain. (8-9)

Several areas must be addressed to become aware of the nature and long-term condition of the current workforce crisis. Technological innovations have developed at a pace that has made it increasingly difficult for education and the marketplace to respond with

effective and timely training. As the pool of qualified healthcare occupation applicants declines an increase in competition among states and regions of the country will further diminish needed resources.

MHHP has noted enrollments in healthcare education as declining. The reversal of this trend has only recently been noted and may be linked to a slowing economy. The factors contributing to decreased enrollment include: "students enrolling in fields other than health care; health education programs are highly expensive to develop and maintain; many faculty are either choosing retirement or making more money practicing instead of instructing; and there is not enough communication and accountability between education and the employment needs of the health care community." (7)

Other inhibiting factors include state and federal regulations of various occupations; the lack of professional respect afforded specific health care occupations, competition from other sectors of the economy and industry, and the overall decline in fundamentally skilled labor to fill these highly technical fields.

MHHP has suggested some strategies to address this workforce problem. These include initiation of collaborative association with educational facilities, government agencies, collective bargaining units and other health care organizations. Moreover, MHHP suggests that some crucial areas that must be addressed include: "work force data collection, health career education in schools, health career distance learning opportunities, streamline the health care licensure process, exempt government owned

hospitals from salary caps, offer small, rural work force grants, update Medicaid reimbursement, and replace health care taxes." (8-9)

Vermont Association of Hospitals and Healthcare Systems (VAHHS)

In the VAHHS report on the state of the health care workforce in Vermont several conclusions where drawn and recommendations made. Vermont classifies itself as a rural state and considers the problems specific to rural states as contributing factors in minimizing opportunities for various aspects of its economy and its workforce.

Healthcare in Vermont is encountering the same challenges faced by other states and regions of the nation. Not enough qualified individuals are available to neither replace an aging workforce nor fill consistently vacant positions. In the publication, "Challenges and Opportunities for the Vermont Health Care Workforce" the state proposed several recommendations to better prepare future educational, health care employment sector, and individuals for work in heath care.

Vermont has identified a multifaceted approach in addressing its problems with filling healthcare workforce vacancies. Not only will the correction of the current problem require time it will also require a coordinated effort from state and local agencies to establish a comprehensive approach to recognizing, preparing, recruiting, and retaining the elements of a future workforce. (10) The summary of findings is included in Table 1.

Healthcare Association of New York State (HANYS)

The Healthcare Association of New York State (HANYS) in their report on the Crisis in Care provides a comprehensive overview of the critical issues of workforce shortage across New York State. This report cites various problems that have contributed to the current situation. The demographics of an aging population (retiring Baby Boomers), the lack of an adequate supply of replacement workers in the subsequent generation (Gen-Xers, Millennials), a declining future workforce of 18-24 year olds due to a population decline in this age group, inadequate methods of worker recruitment and retention, reimbursement issues with Medicaid, Medicare and private insurance companies has limited hospitals, nursing homes, and home care agencies competitiveness for improving salaries and benefits.

This particular publication is the first in a series that will be developed by HANYS under the heading of Health Systems Strategists that will analyze the health care workforce shortages encountered in New York as well as across the nation. Defining the current shortage and outlining its impact is the primary emphasis. Furthermore, this report summarizes reasons for the shortages and describes recruitment and retention strategies. Regardless of its focus on nursing the ideas generated through forums and surveys concerning recruitment and retention is applicable across the health professions spectrum. Suggestions for recruitment and retention strategies included (in order of importance): 1) Competitive pay; 2) Pleasant working environment; 3) Good benefits; 4) Scholarships/training; and 5) Career outreach programs. Common strategies identified by respondents to a HANYS spring 2000 survey noted tuition reimbursement for both licensed and unlicensed workers; enhanced benefit programs, such as free/low cost health

insurance, pension or 401K programs, and voluntary benefit programs; and salary differentials for off-shifts. (11)

HANYS advocates five steps in addressing workforce issues. The suggestion specific to education proposes that initiatives should be developed to expand the workforce supply by investing in training and education and improve the capacity to market health occupations to youth and people seeking second careers (11).

Iroquois Healthcare Association (IHA)

The Iroquois Healthcare Alliance represents 58 hospitals and health systems in 31 Upstate New York counties. Their efforts in addressing the workforce problems have concentrated on working with its members to identify the extent of the shortage and the health professions most difficult to recruit and retain qualified staff for. Surveys were administered in 1999 and 2000 with a significantly high response rate, 62% and 75% respectively. Results indicated that the Upstate workforce is declining, nursing and other technical positions are particularly hard to recruit and retain, Pharmacy, medical records, housekeeping, and other positions are also difficult to fill, and vacancy rates for some professions are as high as 30%. Furthermore, key factors that contribute to respondent's inability to attract and retain staff included the general labor shortage in Upstate New York, a lack of qualified candidates, shift work, facility location, and rate of pay. (12)

The most difficult positions to fill include both nursing and technical support staff. The positions most difficult to fill include: registered nurses, radiologic technicians,

respiratory therapy technicians, pharmacists, and certified nurse assistants. Several recommendations and strategies have been proposed by IHA and include the following: 1) Develop courses and programs targeting outreach to current health care workers, high school students, potential continuing education students, and community college students throughout Upstate; 2) health job placement services; 3) distance learning modules that can be replicated and/or transmitted to all locations in New York State following an inclusive curriculum development process; 4) ongoing monitoring and identification of shortage/need area by the human resources representatives throughout the Iroquois region; and 5) employee incentive strategies for the workforce development program success. This would include funding for transportation, tuition, scholarship/loan forgiveness programs, subsidized day care, and wage enhancements and subsidies for replacement staff time and for employees during training. (12)

Florida Hospital Association (FHA)

The Florida Hospital Association conducted a survey of its member hospitals during a week in February 2000. Key points taken from the executive summary indicated that a 'severe' shortage of radiology technologists was reported by 43% of responding hospital leaders. While 80% of respondents noted a shortage of radiology technologists. Furthermore, a shortage of pharmacists (8.3%), occupational therapists (6.4%), medical technologists (5.8%), physical therapists (5.2%), and respiratory therapists (4%) was noted. A common method used to fill vacant positions has typically been the use of overtime hours for regular hospital staff. Per Diem, pool staff and on-call staff was the second most common solutions to the staffing shortage. Again, the Balanced Budget Act

was cited as a significant contributor to health care organizations ability to recoup sufficient funds for services rendered. This has been cited in other workforce studies as a contributing factor limiting a hospitals ability to remain competitive in attracting qualified staff. (13)

University of California at San Francisco

A 1999 report entitled "The Hidden Health Care Workforce: Recognizing, Understanding and Improving the Allied and Auxiliary Workforce" summarized data regarding supply characteristics of allied health professionals in California. It addressed changes organization and financing of health care and how it is affecting demand for medical professionals. According to this report allied and auxiliary workers, which includes over 200 professions and occupations, make up 60 percent of the country's 10.5 million-person health care workforce. (14)

Identification of three contributing factors were noted and include: 1) health care delivery organizations are struggling to survive in California's competitive health care market; 2) workers are being asked to be more flexible, more tolerant, and more capable team members; and 3) educators are have difficulties preparing future workers with appropriate skills. (14)

Recommendations propose the use of partnerships among leaders in industry, labor and education to address specific issues as well as collect data to evaluate the outcomes of prospective partnerships and suggest continued actions. (14) The summary of findings is included in Table 1.

Southern Illinois University Carbondale

Southern Illinois' rural communities are acutely aware of the need for qualified health professionals in several occupational areas. In an effort to anticipate remedies for an impending workforce shortage, the Office to Economic and Regional Development at Southern Illinois University Carbondale developed several recommendations for health profession educators.

This 1995 report accurately anticipated the need to identify capacity quotas for existing programs relative to current and future demands, develop partnerships with rural providers for student placement as a component of their education program, review recruitment, retention, admissions, and placement strategies to insure that all participating students and participating organizations needs are being met, monitor regional workforce demands to develop a strategy in meeting these challenges through program participation assessment. Ongoing work is being accomplished in addressing the current state of southern Illinois health care workforce. (15)

University of Alaska Anchorage

Several organizations in Alaska have identified a need to address the workforce issue across a spectrum of occupations. The Alaska Human Resource Investment Council (AHRIC) developed a 'blueprint' for establishing workforce development goals for the state. These goals include strengthening involvement of business, industry, and economic development; ensuring access to quality employment education, training, and employment services statewide specifically to underserved rural areas and the economically disadvantaged; evaluation of emerging programs; advocate for maximizing

Alaska's human resources and promote continuous improvement; identify and promote the integration of Alaskans with disabilities to provide opportunities of employment; and strengthen the involvement of Alaska's education system, at all levels, in order to create a more responsive and long-term plan for workforce development. (16)

The State of Alaska identified employment opportunities within the state with the stipulation for prioritizing those occupations deemed critical. *Alaska's Allied Health Workforce: A Statewide Assessment* survey determined that radiologic technologists are one of 18 occupations that ranked highly on four variables: highest turnover; most difficult to recruit; most difficult to recruit because of training; and the largest number of organizations expecting an increase in hiring in the next 3-5 years. Furthermore, Radiologic Technology was identified as an occupation that has a higher than average growth rate, current employment greater than 100, and higher than average wage. This information was included for targeting occupations included in The Alaska Technical and Vocational Education Program. (17)

The survey noted several healthcare professions as a priority for development of educational programs within the state, which may not already exist. The nursing profession tops the list of most mentioned need. Other health professions correlated with the Allied Health Workforce Study identified Pharmacy Technicians, Radiologic Technologists, Coders, Billers, and Insurance Clerks, and Dental Assistants as highly needed. (17)

Bureau of Health Professions Workforce Profiles

The Bureau of Health Professions provides workforce profiles for all 50 states. Information is available regarding the supply, demand, distribution, education and use of health care personnel. These first-ever State Health Workforce Profiles provide detailed data on the supply and demand for physicians, nurses, dentists and some 20 other health care professionals in the 50 states and the District of Columbia. Each profile includes the number of health care professionals working in the state, their education, the communities they work in and the range of services they delivery. For addressing individual state needs or regional concerns this information can be valuable for managing cooperative recruitment initiatives (CRI). (18)

American Society of Radiologic Technologists

Finally, the American Society of Radiologic Technologists (ASRT) developed suggestions to address the problem of personnel shortages. Four areas were identified and include: Educational issues, including faculty development, curriculum revision and improvements in the learning environment. Developing educational programs with an emphasis on evening, weekend, and distance education is a critical first step. Occupation environment issues that include improving job satisfaction, promoting a sense of professionalism, encouraging team work, and assisting technologists to gain control over their professional destiny. Finally, recruitment and retention issues, which focus on the need to recruit greater numbers to the profession that include minority populations. Furthermore, elevating awareness about the profession in elementary and grammar school students would aid in expanding career opportunities. (19)

The ASRT has proposed three initiatives that must be addressed to aid in correcting the current workforce problem: 1) Recruitment of new students and retention of existing technologists; 2) The upgrading of the education and skills of the R.T. work force; and 3) The restructuring of the medical imaging and radiation therapy workplace into a more productive and attractive place to work. (19) In an effort to fully develop guidelines and strategies the ASRT has generated a Recruitment and Retention Tool Kit that provides employers as well as educational programs valuable information that can aid in growing and developing the current workforce. (20)

Discussion

The University of Alaska Anchorage (UAA) developed an Associate of Applied Science Degree in Radiologic Technology. Program was engineered largely based on findings of a joint UAA Alaska State Hospital and Nursing Home Association (ASHNHA) survey, *Alaska's Allied Health Workforce: A Statewide Assessment.* (17) Considerations of previously cited recommendations contributed greatly to the formation and development of the program's mission and goals. Furthermore, identification of professional and community needs as well as educational trends established the framework for completing program creation.

An Advisory group was assembled and provided recommendations regarding the nature, length, and degree required for career entry radiologic technologists. Educational objectives where identified and conform to national curriculum guidelines established by

the American Society of Radiologic Technologists (ASRT), certification eligibility requirements determined by the American Registry of Radiologic Technologists (ARRT), and program integrity and assessment criteria outlined by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The program length is 5 consecutive semesters. Three pre-major course requirements were identified. (21-23)

The program design was formulated based on limited consultation work with community imaging professionals. A working draft was submitted for review by the AAS Advisory Board and accepted. Radiologic Technology education has been historically modeled on the 24-month vocational education prototype with its genesis in the hospital environment culminating in a certificate or diploma. The accepted draft was largely based on a two-year six-semester model traditionally used by community colleges and universities in the United States. The faculty based program design on new developments and technological advances within the profession, an increasing demand for career entry practitioners, the lack of sufficient graduates to off-set market demands and professional attrition, suggested guidelines proposed by the PEW Health Professions Commission's reports, and the recent experience with professional program accreditation and certification eligibility guidelines. (4-5) The original program proposal was ill conceived, structured on an antiquated model, and did not accurately reflect recent changes in educational requirements all of which necessitated a reorganization and restructuring of course sequencing and content which parallels current professional career entry.

The AAS in Radiologic Technology consists of 17 professional courses totaling 47 credit hours of which 18 are clinical practicum credits equating to approximately 1200 clock hours. The remaining 15 credit hours are comprised of general university requirements. Community partnerships have been established and will be expanded beyond the local Anchorage area. Evaluation and assessment activities have been outlined to address program accountability and integrity for continuous improvement.

The Medical Imaging Sciences Department worked closely with the University of Alaska Fairbanks in an effort to expand the delivery of the program. Mechanisms for distance delivery of the curriculum have been investigated and will require additional research to identify cost effectiveness and practicality of this delivery method.

The development of the Radiologic Technology program provides a valuable resource for the local, state, regional, and national health care community. Moreover, it establishes educational opportunities where none have existed before in a highly desirable and economically viable occupation. Finally, the establishment of a cooperative working agreement with the University of Alaska Fairbanks to address similar community concerns regarding a lack of qualified technologists available for employment has been concurrently developed. The Tanana Valley Campus of UAF and Fairbanks Memorial Hospital have secured personnel for the sole purpose of providing UAA with program support for implementation of distance course work for the fall of 2002.

Conclusion

The development of a Radiologic Technology education program at the University of Alaska Anchorage began in the fall of 2001 with the development and delivery of trial courses. Nine trial courses were developed over the first three semesters through the summer of 2002. These were intentionally created to coincide with the proposed degree program that was also under construction. In June 2002 the University of Alaska Board of Regents approved the AAS degree in Radiologic Technology. Application for program recognition from the ARRT was concurrently submitted and acknowledgement was received in August. Moreover, program recognition was sought and officially granted in November 2002 by the Northwest Association of Universities and Colleges.

In addition to creating distance courses the Medical Imaging Sciences Department is working with Providence Alaska Medical Center to secure an on-site Clinical Education Coordinator that provides primary supervision of all assigned students as well as assume instructional responsibilities for the program's procedures lab. This will afford the University the opportunity to expand the incoming class size in the Anchorage area.

It was the intent of the University of Alaska Anchorage to seek programmatic accreditation through the JRCERT with tentative program review and future site visit. This would provide the program with measurable outcomes from the first two classes of graduates. Unfortunately, the University system has no plan to develop stability within the program and has elected to continue the program without permanent faculty.

With the information obtained from the Pew Health Professions Commission reports as well as the comprehensive and ongoing investigations of workforce issues by AHA, IHA, HANYS, MHHP, VHHS, BHS, ARHC and several others the development of the AAS in Radiologic Technology program at the University of Alaska Anchorage is attempting to meet the needs of the profession with a creative and expansive approach that will continue to respond to the needs of the changing health care environment.

Resources:

1. Bureau of Labor Statistics. (2000). *Occupational Outlook Handbook, 2000-01 Edition.* (Bulletin 2520), Washington, D. C. U.S.

2. American Hospital Association. (2001). AHA News Now. *Staff Shortages Loom Large.* Available at: http://www.trusteemag.com/asp/inside.asp?Type=articledisplay&ArticleID=15416&PublD=3 Accessed 9-27-2001.

3. Bureau of Health Professions. (1995). *Building the Future of Allied Health, Report of the Implementation Task Force of the National Commission on Allied Health.* Rockville, MD: U.S. Executive Summary available on-line at: ftp://ftp.hrsa.gov/bhpr/publications/ncahtfsum.pdf Accessed: 12-23-2002.

4. Pew Health Professions Commission. (1995). *Critical Challenges: Revitalizing the Health Professions for the Twenty-First Century. The Third Report of the Pew Health Professions Commission.* December 1995. *Available on-line at:* http://futurehealth.ucsf.edu/summaries/challenges.html Accessed 9-10-2000

5. Pew Health Professions Commission. (1998). *Recreating Health Professional Practice for a New Century: The Fourth Report of the Pew Health Professions Commission: Executive Summary.* Available on-line at: http://www.futurehealth.ucsf.edu/pdf_files/rept4.pdf Accessed 9-10-2000.

6. American Hospital Association Strategic Policy Planning Committee. (2001). *Workforce Supply for Hospitals and Health Systems: Issues and Recommendations.* Available on-line at: http://www.ahapolicyforum.org/policyresources/WorkforceB0123.asp Accessed 02-14-2001.

7. American Hospital Association Commission on the Workforce for Hospitals and Health Systems. *In Our Hands: How Hospital Leaders can Build a Thriving Workforce.* Available on-line at: http://www.hospitalconnect.com/aha/key_issues/workforce/commission/InOurHands.html Accessed 05-02-2002

8. Minnesota Hospital and Healthcare Partnership (MHHP). (June 2000). *Facts About the Health Care Work Force Shortage.* Available on-line at: http://www.mhhp.com/workfrce/wffacts.htm Accessed 10-26-2000.

9. Biel E, Anderson L. [Contacts]. (August 2000). *Report of the Task Force Members Work Force Development Plan. MHHP's Proposed Work Force Development Plan Suggestions for Survey.* Available on-line at: http://www.mhhp.com/ Accessed 10-26-00.

10. Vermont Association of Hospitals and Health Systems. (July 2000). *Challenges and Opportunities for the Vermont Health Care Workforce: Workforce White Paper.* Available on-line at: http://www.vahhs.org/lucie/Publications/Workforce%20White%20Paper.htm Accessed 9-22-00.

11. Healthcare Association of New York State. (December 2000). *The Crisis in Care: First in a Series on Health Care Workforce Issues.* Health Systems Strategist. Available on-line at: http://www.hanys.org/newsview/issues/advocacy/wkfcstrat12-00.pdf Accessed 1-15-01.

12. Iroquois Healthcare Alliance United Iroquois Shared Services. (2000). *The Shortage of Health Care Workers In Upstate New York: Survey Results and Recommendations.* May 2000. Available on-line at: http://www.iroquois.org/IHA%20workforce%20report.htm Accessed 10-17-00.

13. Florida Hospital Association. (July 2000). *Shortages of Allied Health Professionals.* Available on-line at: http://www.fha.org/acrobat/alliedreport.pdf Accessed 8-28-00.

14. Ruzek JY, Bloor LE, Anderson, JL (July 1999). *The Hidden Health Care Workforce: Recognizing, Understanding and Improving the Allied and Auxiliary Workforce.* UCSF Center for the Health Professions. Executive Summary. The Allied and Auxiliary Health Care Workforce Project. Available on-line at: http://futurehealth.ucsf.edu/AHexecsum.html Accessed 5-17-00.

15. Wright WR, Leitner DW, Vinson, RJ, Sarvela PD, & Isberner FR. (1995). *A Projection of Health Professions Workforce Needs Into the Next Century in Rural Southern Illinois: Implications for Health Professions Education.* Southern Illinois University Carbondale. Available at: http://www.siu.edu/~crhssd/crbriefs/vol1no3.htm Accessed 10-26-2001.

16. Alaska's Future Workforce Strategic Policies and Investment Blueprint. Final Draft. November 6, 2000. Available on-line at: www.gov.state.ak.us/ltgov/voced/main.htm Accessed 10-15-2001.

17. Alaska Center for Rural Health. (2001). *Alaska's Allied Health Workforce: A Statewide Assessment.* University of Alaska Anchorage. March, 2001. Available on line at: www.ichs.uaa.alaska.edu/acrh Accessed 8-27-2001.

18. Bureau of Health Professions. *National Center for Health Workforce Analysis. State Health Workforce Profiles.* Available at: http://bhpr.hrsa.gov/healthworkforce/reports/profiles/default.htm Accessed 12-23-2002.

19. American Society of Radiologic Technologists. *Declining Workforce Numbers Take Center Stage At Recent Annual Meetings.* 5/26/00. Available at: https://www.asrt.org/asrt.htm Accessed 8-28-01.

20. American Society of Radiologic Technologists. *Curriculum Guide.* (2002 Curriculum). Albuquerque: ASRT.

21. American Society of Radiologic Technologists. *Recruitment and Retention Took Kit.* Available on-line at: www.asrt.org
Accessed: 12-13-2002.

22. American Registry of Radiologic Technologists. (2001). *Content Specifications for the Examination in Radiography.* St. Paul, MN: ARRT.

23. Joint Review Committee on Education in Radiologic Technology. (2001). *Standards for an Accredited Educational Program in Radiologic Sciences.* JRCERT.

Table 1. Educational recommendations for the current workforce crisis.

AHA 2002 Report	Work with local community colleges, universities, and other educational organizations to develop creative approaches to educating students…offer scholarships, internships, and externships… .provide professional development opportunities for current employees….address shortages of faculty, clinical training sites, and other capacity barriers….identify realistic expectations for new graduates competencies and readiness to work….. and organize local or regional roundtables of hospitals executives, educators, and clinical leaders to provide feedback .
IHA (New York)	Develop courses and programs targeting outreach to current health care workers, high school students, potential continuing education students, and community college students throughout Upstate; ……distance learning modules that can be replicated and/or transmitted to all locations in New York State following an inclusive curriculum development process; …..employee incentive strategies for the workforce development program success. This would include funding for transportation, tuition, scholarship/loan forgiveness programs, subsidized day care, and wage enhancements and subsidies for replacement staff time and for employees during training.
HANYS (New York)	Initiatives to expand workforce supply, including investment in training and education and improving the capacity to market health careers to youth and people seeking second careers.
MHHP (Minnesota)	Partner with education institutions, government agencies, and professional and accrediting organizations, to assure that individuals can easily enter into and advance within the health care field.
VHHS (Vermont)	Provide career opportunity information as a component of a comprehensive recruitment program. Target junior and senior high school students & career changers…..coordinate efforts between primary, secondary, post-secondary education and the marketplace….identify rural state educational needs at all levels….identify desired level of education for health professions….matriculation, internship and financial aid programs need to be developed
FHA (Florida)	Increase funding to educational programs to expand availability and create an attractive marketing approach in selling health careers to more high school students.
ASRT	Recruitment of new students and retention of existing technologists. Promote the upgrading of the education and skills of the R.T. work force. Restructure the medical imaging and radiation therapy workplace into a more productive and attractive work environment.
SIU Carbondale (Illinois)	Review education program capacity to meet local, regional, and national demands. Work with health care providers to develop cooperative strategies for student and graduate placement in rural communities. Review and prepare programs for eventual baccalaureate requirements for career entry. Monitor regional health professions' workforce demands and evaluate effectiveness of graduate placement.

Table 1. cont. Educational recommendations for the current workforce crisis.

University of California San Francisco	Require health education programs to meet skill requirements that reflect general employment skills as well as clinical and technical competence….improve work environments that are committed to high quality, flexibility, and service orientation and culturally diverse. Build new participatory structures that involve labor, education, and the allied and auxiliary workforce in change and quality improvement processes. Improve regulation of professions, occupations and health care facilities in order to effectively use trained allied and auxiliary workers to deliver health care.
ASHNNA (Alaska)	Develop allied health occupations where none have been available in the state. Expand delivery of existing allied health programs to communities beyond the Anchorage area. Expand delivery of developing programs such as Radiologic Technology and Pharmacy Technician to other locales in the state.
PEW Commission Reports	Focus on restructuring the mission and organization of allied health education programs through partnerships with delivery systems, professional associations, educators, regulators, consumers, and the public…..structure allied health curriculum on related discipline clusters, multi-skilling and interdisciplinary core curricula….improve student and professional articulation and career ladders within disciplines and between professions….develop new and improve existing education-practice linkages with diverse care delivery environments, such as managed care, home health care, and ambulatory care, for the benefit of both faculty and students…..recruit minority, disabled, and disadvantaged students and practitioners that reflects the cultural diversity of the nation's population….promote faculty leadership skills and competence in clinical outcomes and research…..establish innovative collaborations among professional associations….improve the collection, evaluation and dissemination of data and innovations related to allied health education, training, practice, and regulation….facilitate an environment to assist in changing professional training to meet the demands of the new health care system….continue to move education into ambulatory practice….encourage public service of all health professional students and graduates…..identify and standardize auxiliary health competencies that are learned on the job…..facilitate the continuous retraining of allied health professionals.

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